UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 10 2012

REPLY TO THE ATTENTION OF: E-19J

George Poirier
Federal Highway Administration
525 Junction Road, Suite 8000
Madison, Wisconsin 53717

Rebecca Burkel
Wisconsin Department of Technical Services
Wisconsin Department of Transportation
P.O. Box 7965
Madison, Wisconsin 53707-7965

Gary Evans
Waukesha County Department of Public Works
515 West Moreland Blvd.
Waukesha, Wisconsin 53188

Re: Draft Environmental Impact Statement for the West Waukesha Bypass – County TT, I-94 to WIS 59, Waukesha County, Wisconsin - CEQ # 20120343

Dear Messrs. Poirier and Evans and Ms. Burkel:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-mentioned document provided by Federal Highway Administration (FHWA) and Wisconsin Department of Transportation (WisDOT). Our comments in this letter are provided in accordance with our responsibilities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

Waukesha County, in consultation with WisDOT and FHWA, is proposing to improve the safety and efficiency of the arterial connection between the WIS 59/County X intersection as the southern terminus and I-94 as the northern terminus on the west side of Waukesha. The proposed action is the last piece of a long-planned circumferential route around Waukesha. As indicated in the Draft Environmental Impact Statement (EIS), the planned arterial connection improvement would no longer serve as a bypass, as originally designated. Instead, the proposed improvement is designed to fill a gap in the transportation system by providing an efficient north-south arterial on Waukesha's west side, as recommended in regional, county, and city transportation system plans.

As stated in the Draft EIS, the proposed improvements have two objectives: 1) improve safety by providing a roadway that meets current design standards, and 2) accommodate traffic demand generated by existing and planned development within and outside the study corridor.

In addition to the No Build Alternative, three build alternatives have been retained for evaluation in the Draft EIS. Between the northern terminus of I-94 and the Wisconsin & Southern Railroad located in the southern half of the study area, the 4-lane County TT corridor alternative has been retained. According to the Draft EIS, the County TT corridor has been the focus of planning for the West Waukesha Bypass for decades as indicated in plans by the Southeastern Wisconsin Regional Planning Commission (SEWRPC), Waukesha County, and the City of Waukesha.

Chapter TRANS 75 of the Wisconsin Administrative Code indicates that new highway construction or reconstruction projects funded in whole or in part from state funds or federal funds shall include bikeways and sidewalks. To fulfill this requirement, the Build Alternatives from I-94 to Sunset Drive will include on-road bicycle accommodation and off-road bicycle/pedestrian accommodations. However, under TRANS 75.05, bikeways and sidewalks can be excluded in constrained environments if establishing them would have excessive negative impacts. The study team is in the midst of obtaining a waiver from TRANS 75 requirements for the area at Sunset Drive and south of Sunset Drive due to additional high-quality wetlands that would be affected with a separate multi-use path.

Between the Wisconsin & Southern Railroad and the Wis 59/County X intersection, three 4-lane build alternatives have been retained: the Sunset-to-County X, the Pebble Creek West, and the Pebble Creek Far West alternatives. Three alternatives are proposed for the southern portion of the study area in an attempt to avoid adversely impacting high-quality natural resources.

Sunset-to-County X Alternative – This alternative would cross a farm field on new alignment south of the Wisconsin & Southern Railroad before tying into Sunset Drive near the Pebble Creek crossing. The proposed route would then follow Sunset Drive and County X to the County X/WIS 59 intersection. Wetland impacts associated with this alternative are approximately 6.5 acres.

Pebble Creek West Alternative – Refinements were made to the original alignment as a result of wetland delineations performed by SEWRPC in 2011 in an attempt to minimize impacts to high-quality aquatic resources in the Pebble Creek wetland complex. Wetland impacts associated with this alternative are approximately 8.4 acres.

Pebble Creek Far West Alternative – This alternative shares most of the characteristics of the Pebble Creek West Alternative. Distinguishing differences include a reduction in aquatic resource impacts, but deeper slope cuts could potentially disrupt groundwater flow to the Pebble Creek wetland complex. Wetland impacts associated with this alternative are approximately 5.7 acres.

We would like to take this opportunity to compliment FHWA, WisDOT, and Waukesha County on their continued efforts to revise the alternatives to meet the stated purpose and need while reducing resource impacts. Based on available information, EPA views the Pebble Creek West Alternative as the less damaging of the two Pebble Creek alternatives in terms of wetland impacts. This statement is based on the understanding that the Pebble Creek West Alternative would cause less damage to higher quality wetlands and should not result in significant disruption of ground water flow (through sand lenses) that feed the sedge fen wetlands along

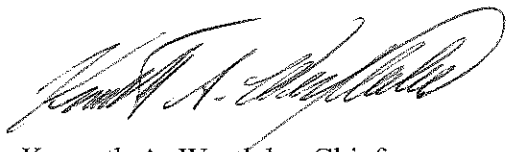
Pebble Creek. It will be important that all practicable steps are taken to avoid wetland impacts along this alternative, and we support efforts to bridge aquatic resources where possible. It is also important to ensure that road construction does not "cut into" sand lenses along the alignment. EPA understands that the Pebble Creek West Alternative on the proposed alignment can be constructed without disturbing the sand lenses.

The Pebble Creek Far West Alternative would necessitate cutting into one of the sand lenses during road construction, thus significantly impacting the water source for the sedge fen areas along Pebble Creek. This alternative would have significant adverse impacts on the sedge fen complex along Pebble Creek.

Based on our review of the Draft EIS, EPA has rated the Draft EIS as "**Environmental Concerns – Insufficient Information (EC-2)**." This rating is based on a lack of conceptual mitigation, preferably within the same watershed as impacted resources; remaining questions about the alternatives' performance; cumulative effects questions; and state-listed threatened or endangered species concerns. In particular, a conceptual mitigation plan needs to be developed before we can fully assess project impacts and determine whether Pebble Creek will suffer adverse impacts as a result of the proposed project. The Final EIS should disclose all available best management practices that will eliminate surface water runoff from construction and operation of the road from entering the Pebble Creek wetland complex. As more detailed construction plans are developed, FHWA, WisDOT, and Waukesha County will need to ensure that ground water flow to the sedge fens is maintained. Exactly what actions may need to be taken to protect ground water flow will need to be determined once a specific alignment is developed, and should be part of the minimization/mitigation plan. EPA is available to discuss these matters. Lastly, we look to the Final EIS and Record of Decision to commit to incorporating all mitigation measures mentioned in the EIS into project design and construction.

Thank you in advance for your consideration of our comments. EPA's detailed comments are enclosed as well as a summary of the rating system used in the evaluation of the Draft EIS. We are available to discuss the contents of this letter as well as elements of a conceptual mitigation plan. Please send a copy of the Final EIS once it is available. If you have any questions, please contact me at 312-886-2910, Kathy Kowal of my staff at 312-353-5206 or via email at kowal.kathleen@epa.gov or Sue Elston of EPA's Wetlands Section at 312-886-6115 or via email at elston.sue@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosures: Summary of Ratings Definitions
EPA's Detailed Comments

cc: Marie Kopka, U.S. Army Corps of Engineers
Michael Thompson, Wisconsin Department of Natural Resources
Don Reed, Southeastern Wisconsin Regional Planning Commission
Bethaney Bacher-Gresock, Federal Highway Administration
Karla Leithoff, Wisconsin Department of Transportation
Mark Chandler, Federal Highway Administration
Doug Cain, Wisconsin Department of Transportation

EPA's Detailed Comments on the Draft Environmental Impact Statement for the
West Waukesha Bypass – County TT,
I-94 to WIS 59, Waukesha County, Wisconsin
December 10, 2012

Alternatives

Transportation Impacts

The Transportation Impacts Section found in Section 3 of the Draft EIS states, "Under the Pebble Creek West and Far West alternatives there would be a greater amount of traffic on the bypass north of Sunset Drive compared to the No-Build and Sunset-to-County X alternatives."

> **Recommendation:** This statement is confusing and should be clarified in the context of project purpose and alternatives analyses that retained the Pebble Creek West and Far West alternatives.

Level of Service for Build Alternatives

The Purpose and Need Section includes Table 1-5, entitled *Existing and Design Year (Year 2035) Segment Level of Service for No-Build Alternatives*. Similar information is not provided in the Alternatives Considered Section for the build alternatives still under consideration. EPA believes this information would be useful to inform decision makers and reviewers of the build alternatives' ability to handle traffic demand at the present time and at the design year.

> **Recommendation:** EPA recommends that the Final EIS include a table with information for the highway segments and level of service (LOS) for each of the build alternatives listed in Table 2-3.

Table 1-7, entitled *Existing and Design Year (2035) Weekday PM Peak Hour Level of Service: Traffic Signals & Four-Way Stop Intersections* indicates the intersection at County TT and Madison Street is controlled by a four-way stop and will operate at LOS F in the design year. The Draft EIS indicates that, under existing traffic volumes, all signalized intersections operate at LOS C or better. It seems likely that a replacement of the four-way stop at County TT and Madison Street with a signalized intersection will result in a better LOS.

> **Recommendation:** The Final EIS should include a discussion focused on four-way stops in the study corridor and whether replacing them with signalized intersections would improve LOS. If four-way stops will not be replaced with signalized intersections, the rationale behind retaining four-way stops should be included in the Final EIS.

Table 3-2, entitled *Projected 2035 Segment and Intersection Level of Service* indicates the LOS for the Sunset Drive: County TT to County X intersection under the Pebble Creek Alternative is projected to be "D" and the Sunset Drive/County X intersection under the Sunset-to-County X Alternative would be "D." The desirable LOS for signalized intersections is stated as LOS C.

> **Recommendation:** The Final EIS should explain how these LOS designations were derived. Furthermore, if the design year LOS will be below the desirable LOS, what are the advantages of the Pebble Creek Alternatives and the Sunset-to-County X Alternative if traffic demand will not be adequately accommodated?

Crash Rates

A road safety audit conducted by WisDOT and Waukesha County concluded that the Sunset-to-County X Alternative would have a higher risk of crashes than the Pebble Creek Alternatives because of the additional intersection turns required. Later in the same paragraph, the Draft EIS states that additional turning movements associated with traveling along the Bypass route *may* increase number of crashes compared to Pebble Creek alternatives. (emphasis added)

> **Recommendation:** "May" is a vague term that does not allow decision makers or the public to understand how safe the Sunset-to-County X intersections will be. Would these intersections have traffic signals and/or dedicated turning lanes? We recommend an estimate of crash rates based on similar road configurations be included in the Final EIS to provide the reviewer with quantitative figures for projected crash rates and a better understanding of potential risk associated with the Sunset-to-County X Alternative.

Median Width North of Sunset Drive

Between Rolling Ridge Drive and Northview Road, the 2-lane Meadowbrook Road will be widened to continue the 4-lane divided urban section with a 24-foot-wide raised grass median. Between Northview Road and Summit Avenue, the road will be widened to accommodate 4 lanes and a 30-foot-wide median.

> **Recommendation:** The Draft EIS is unclear why median width changes are proposed north of Sunset Drive. The Final EIS should include an explanation for different median widths north of Sunset Drive.

Bicycle/Pedestrian Accommodations

Chapter TRANS 75 of the Wisconsin Administrative Code indicates that new highway construction or reconstruction projects funded in whole or in part from state funds or federal funds shall include bikeways and sidewalks. To fulfill this requirement, the Build Alternatives from I-94 to Sunset Drive will include on-road bicycle accommodation and off-road bicycle/pedestrian accommodations. However, under TRANS 75.05, bikeways and sidewalks can be excluded in constrained environments if establishing them would have excessive negative impacts. The study team is in the midst of obtaining a waiver from TRANS 75 requirements for

the area at Sunset Drive and south of Sunset Drive due to additional high-quality wetlands that would be affected with a separate multi-use path.

> **Recommendation:** EPA anticipates that WisDOT will make a decision regarding the requested waiver for the area at and south of Sunset Drive prior to the release of the Final EIS. A decision on the waiver is relevant to understanding the location and extent of impacts to natural resources and necessary mitigation. EPA recommends retaining as small a footprint as possible in the corridor, particularly south of Sunset Drive.
>
> We also recommend the Final EIS look at alternatives for a bicycle/pedestrian path south of Sunset Drive. We recommend consideration of a path running adjacent to the Merrill Hills Country Club golf course.

Affected Environment, Impacts, and Mitigation

Aquatic Resource Mitigation

The Draft EIS indicates that, if a build alternative is implemented, a wetland mitigation plan will be developed during project design, in consultation with state and federal agencies. Additionally, the Draft EIS states that WisDOT and Waukesha County have begun a review of the project corridor to identify potential mitigation sites, and have identified two properties owned by Waukesha County as suitable. The Draft EIS provides a very brief description of one parcel. If on-site or near-site mitigation measures are not available, WisDOT proposes to debit wetland acreage credits from a state-wide wetland mitigation bank in Walworth County, which is not in the same watershed as the West Waukesha Bypass project.

> **Recommendation:** We agree with the concept stated in the Draft EIS that the focus of potential mitigation should be on properties adjacent to larger wetland corridors. However, making mitigation decisions during the project design phase does not allow for public input on potential mitigation nor does it allow for a decision to be made about whether a build alternative should be implemented without knowing the extent of impacts and the potential for proposed mitigation to successfully mitigate impacts. Information pertaining to conceptual mitigation for aquatic resource impacts is vital to understanding whether impacts will be reduced to an acceptable level.
>
> Based on the above, we anticipate that discussions regarding conceptual mitigation will take place between the appropriate agencies prior to the release of Final EIS to ensure an appropriate mitigation and monitoring plan (including measures of success such as percentage of living native species/acre, maximum percentage of non-native invasive species (NNIS) allowed per acre, etc.) are proposed in the Final EIS. We suggest consideration of flexible mitigation options that would not only mitigate for impacted acreage and lost functions and values, but also enhance the Pebble Creek riparian buffer and wetland complex; any surplus mitigation credits could possibly be used for other highway projects

in southeast Wisconsin. At a minimum, we recommend the conceptual mitigation discussion in the Final EIS include the following information: ratios for impacted wetland types, whether mitigation will be in-kind, proposed within the same watershed, etc.

Stormwater Runoff

In the Indirect Effects Analysis section, the Draft EIS indicates, "The indirect effects on natural resources is more difficult to assess. An expert panel consisting of various community members expressed concern about runoff from the roadway adversely affecting Pebble Creek's Class II brook and brown trout, as well as a warmwater fishery where longear sunfish (a state-listed threatened species) are documented to exist. … Runoff from the new roadway would contain pollutants that would be carried into adjacent wetlands, and potentially Pebble Creek, if effective mitigation measures are not implemented. If this occurs, it would degrade the wetlands downslope of the roadway and water quality, and associated fisheries and wildlife community within Pebble Creek if the project is built."

Furthermore, the Pebble Creek Watershed Protection Plan (pp. 26-30) notes "directly connected imperviousness" is a major factor in degradation of urban water bodies. The Plan defines directly-connected imperviousness as impervious area that discharges directly to the stormwater drainage system without potential for infiltration.

Lastly, the draft *West Waukesha Bypass Indirect and Cumulative Effects Analysis – Summary of Expert Panel Input* (June 2011) states, "It is important to note that a riparian buffer effectiveness analysis was included within the Pebble Creek Watershed Protection Plan. This analysis indicates that riparian buffers are extremely effective in protecting water quality by reducing contaminant loads as well as terrestrial wildlife and instream aquatic communities. The Pebble Creek watershed plan concluded that the existing and future water quality and associated high quality fishery and wildlife in this river system was largely due to the high quality and extent of the riparian buffer land uses and environmental corridors adjacent to Pebble Creek. Therefore, the protection of these is the key to the protection of this stream system and quality of life of the residents that live within it."

Recommendation: Due to the high quality of aquatic resources in the study area, special attention needs to be paid to stormwater runoff treatment. Stormwater treatment options and their effectiveness at reducing adverse impacts to aquatic resources should be discussed in the Final EIS. We recommend close coordination with the U.S. Army Corps of Engineers, Wisconsin Department of Natural Resources (WDNR), and Southeastern Wisconsin Regional Planning Commission (SEWRPC) to develop suitable best management practices to reduce stormwater runoff impacts. We appreciate the exhibits in Section 3, which illustrate stormwater mitigation features; however, it can be difficult to discern effectiveness without seeing suggested sites in the field. Also, we recommend discussing equipment location with agencies during the design phase and construction phase to avoid impacts as much as possible from the construction of stormwater mitigation features.

The Draft EIS indicates that stormwater treatment techniques, such as bioretention facilities in the form of rain gardens in the median, and use of catch basins with yearly maintenance will also be investigated.

> **Recommendation:** EPA recommends the Final EIS and Record of Decision (ROD) include a commitment to incorporate bioretention facilities to the extent practicable. Filtration of stormwater runoff is particularly important in this study area due to the presence of high-quality aquatic and terrestrial resources.

Streams

The Draft EIS indicates that Pebble Creek contains a large amount of in-stream cover, characterized by undercut banks, woody debris, and large boulders. In-stream large woody debris is an important component of stream ecosystems that provides essential food and habitat for aquatic organisms. However, culverts and bridges can create physical and hydrological migratory barriers to fish movement.

> **Recommendation:** All stream crossings must be designed to ensure that there is enough capacity to carry bankful flows. Any culverts should be partially buried to maintain stream bed substrate continuity at stream crossings. If box culverts are used, these should be open bottom for the same reason. Natural stream channel design principles should be utilized when placing anything in streams.

Aquatic Health

The Draft EIS indicates the Sunset-to-County X Alternative would affect 3.5 acres of wetland at the Sunset Drive crossing (Wetlands 9 and 11). The Surface Water Impacts section of the Draft EIS notes the potential for increased thermal impact to Pebble Creek from the Sunset-to-County X Alternative, because runoff from the roadway would be close to Pebble Creek. The Draft EIS also states that, because of the Pebble Creek temperature variations from year to year that are driven by air temperature, the potential increase in water temperature from roadway runoff is *unlikely* to adversely affect aquatic organisms. (emphasis added)

> **Recommendation:** We request additional detail be provided in the Final EIS regarding the conclusion that potential increase in water temperature from roadway runoff is unlikely to adversely affect aquatic organisms. We suggest coordination with WDNR to confirm this conclusion regarding affect to aquatic organisms. We also request that correspondence with WDNR on this issue be added to the Final EIS as an appendix.

Floodplain

The Draft EIS states the loss of naturally vegetated floodplains may aggravate flood hazards and reduce flood velocities and peaks. The Draft EIS also states that, given the small acreage

affected compared to the size of the floodplain, loss of cover type is not expected to alter the flood hazard.

> **Recommendation:** We believe the cumulative impacts analysis would be more complete if the Final EIS contained an estimate of floodplain acreage affected by all reasonably-foreseeable projects. We believe the list of projects to estimate comprehensive floodplain impacts should include those transportation projects listed in the 2035 regional transportation system plan, as well as the WIS 59 widening project west of County X which will cross floodplain in two locations, and the WIS 83 widening project which will affect one larger floodplain area along Scuppernong Creek. Additionally, the rationale for the above statement regarding the small acreage of affected floodplain and unaltered flood hazard needs to be substantiated. Acreages and percentages of affected floodplain compared to the remaining, unaffected floodplain will aid in explaining to reviewers the extent of floodplain impact.

Land Use and Indirect Effects

In Section 3.3.7 – Staff Analysis, the Draft EIS states, "Areas already developed, designated as primary environmental corridor (PEC), or in public ownership *likely* would not change *land use* as an indirect result of the project." (emphasis added)

> **Recommendation:** The EIS would be enhanced by an explanation of the above statement. We recommend the discussion focus on: 1) ownership of PECs, 2) how land use of areas designated as PECs or areas held in public ownership might change as an indirect result of the project (i.e., be developed into residences, etc.), and 3) options for permanent protection of resources not already publicly held and protected in perpetuity.

Cumulative Effects Analysis

The Water Quality section of the cumulative impacts analysis states that once 25 percent of a watershed develops, it's hard to maintain water quality and biological diversity. Approximately 41 percent of the Pebble Creek watershed was urbanized in 2005 according to the *Pebble Creek Watershed Protection Plan* (Waukesha County 2008).

> **Recommendation:** If 41% of the Pebble Creek watershed has already been urbanized as of 2005 and if this equates to 9% directly-connected imperviousness, with 25% set as the threshold beyond which it is difficult to maintain good water quality, the Final EIS should "connect the dots." Tabular formats are useful to present quantitative effects. For example, directly connected imperviousness and anticipated percent urbanization for each alternative would provide reviewers with a clear explanation of potential effect to the watershed. We recommend this information be included in the Final EIS.

The cumulative impacts analysis assumes build-out of those transportation projects included in the SEWRPC 2035 regional transportation system plan, such as new arterials and collectors, improvements to existing arterials and collectors, new interchanges along existing freeways or new arterials, and improvements to existing interchanges.

> **Recommendation:** We believe the cumulative impacts analysis would be more complete if the Final EIS contained an exhibit showing the location of those transportation projects included in the 2035 regional transportation system plan. We recommend resource impact estimates from the transportation projects included in the 2035 plan be included in the cumulative effects analysis for affected resources. For example, wetland type(s) and acreage affected as a result of the widening of WIS 59 along a 5-mile-long corridor should be estimated to include a comprehensive cumulative effects analysis.

The Draft EIS indicates that, cumulatively, the proposed project and other foreseeable actions could reduce habitat for the Blanding's turtle and the Butler's gartersnake. Additionally, the Sunset-to-County X Alternative would affect the state-listed seaside crowfoot, which is the only known population of seaside crowfoot in Waukesha County and may be the largest known population in the State. Likewise, the Draft EIS states the WIS 83 widening project will affect threatened and endangered species habitat north of US 18, but the extent of the impact is not known. These statements are too vague to provide decision makers and the public with an understanding of the extent of habitat reduction for these species.

> **Recommendation:** We strongly recommend the Final EIS include more specific information, including an estimate of habitat (acreage) for the three species that could be lost as a result of the proposed project and other foreseeable actions. Converting that estimate to a percentage allows reviewers to easily understand the extent of potential change. We also recommend a discussion focused on suitable sites for transplanting the seaside crowfoot via coordination with the WDNR and SEWRPC be included in the Final EIS. If a suitable site(s) is located, we urge the project proponents to commit to working with the WDNR and/or SEWRPC to transplant the seaside crowfoot. Lastly, a conclusion as to whether remaining habitat for the Blanding's turtle and the Butler's gartersnake will be sufficient to allow for sustainable populations of the state-listed species should be provided via consultation with WDNR and SEWRPC.

In EPA's opinion, the following statement was not substantiated by the information found in the Cumulative Effects Analysis: "Implementing mitigation measures would result in a *minimal* cumulative impact on the Blanding's turtle and Butler's gartersnake, and Little Brown Bat." (emphasis added)

> **Recommendation:** Mitigation measures were not discussed in the Cumulative Impacts Analysis section. We reiterate our immediately preceding Recommendation regarding percentages of suitable habitat remaining, suitable habitat that will be lost as a result of foreseeable projects, etc. be added to this section.

Direct Impacts to Resources

As stated in the Environmental Corridor and Natural Area Impacts section, several small acreages (i.e., 0.2 – 1.0 acre) of environmental corridor, isolated natural resource area, prairie/wetlands natural areas, and upland buffer adjacent to wetlands will be impacted by proposed build alternatives. The Draft EIS is not clear whether reducing the width of the proposed median and/or inside or outside shoulders or bicycle/pedestrian walkway would avoid any of these small acreage impacts. Reducing or eliminating small acreage impacts by reducing the size of the median would offer several benefits: reduce edge impacts and further fragmentation of remaining resources, support long-term success of the resources, remove additional stressors to wildlife, and reduce mitigation obligations. Several unique and high-quality plant communities largely devoid of major invasive plant infestations exist throughout the project area. The quality and diversity of species depends on available habitat. To maintain these varied ecosystems, fragmentation should be avoided; construction can increase the population of non-native invasive species via ground disturbance.

> **Recommendation:** We request the Final EIS address whether small acreage impacts can be further reduced or eliminated by reducing typical cross-sections. If this is possible, we strongly urge FHWA, WisDOT, and Waukesha County commit to incorporating these actions in the ROD.

Threatened or Endangered Species

The Draft EIS states WisDOT will evaluate the feasibility of reconstructing bridges over Pebble Creek in winter to avoid the little brown bat's May-September roosting period.

> **Recommendation:** We request FHWA, WisDOT, and Waukesha County commit to demolishing any bridges during the winter months to avoid the little brown bat's roosting period.

WDNR's Butler's Gartersnake Conservation Strategy (DNR 2005) (Strategy) developed categories for species habitat in southeast Wisconsin based on site size and quality. According to the Strategy, Tier 3 sites could support large populations and are critical to the long-term conservation of the species. Additionally, the Draft EIS indicates that the loss of a population at a Tier 3 site would jeopardize the status of this species. There is a large block of Tier 3 habitat in the study area; presumably, this is the habitat in the western half of Pebble Creek Park north of Sunset Drive, which is stated as providing habitat for state threatened reptile species.

The Draft EIS also indicates that, for Tier 3 sites, all suitable habitat must either be maintained or the equivalent of any lost suitable habitat must be restored elsewhere within the habitat patch so there is no net loss. Proposed mitigation includes development of a specific management plan to mitigate for habitat loss for the Blanding's turtle and Butler's gartersnake in consultation with WDNR in a future design phase. This statement is clouded by another statement in the same paragraph (see page 3-139): "*If necessary*, WisDOT and Waukesha County will identify suitable

habitat to add to the Tier 3 habitat between the Wisconsin & Southern Railroad and WIS 59 to mitigate for the 6.5 – 8.3 acre impact in that area." (emphasis added)

> **Recommendation:** It is difficult to determine whether WisDOT and Waukesha County are planning to provide suitable habitat per the Strategy. Additionally, proposed mitigation, including development of a specific management plan to mitigate for habitat loss for these two species, should be part of the Final EIS. We request the above information be included in the Final EIS following consultation with the WDNR. We also request that correspondence with WDNR on this issue be added to the Final EIS as an appendix.

The Draft EIS indicates that ecopassages will be evaluated at all stream crossings and at other strategic locations in wetland and upland areas. Two ecopassages will be evaluated for the Pebble Creek West and Pebble Creek Far West Alternatives between Sunset Drive and WIS 59 to reduce fragmentation of the environmental corridor and maintain habitat connectivity. Further, *during the design phase*, WisDOT and Waukesha County will evaluate the *need* for wildlife barriers on both sides of the new roadway from Sunset Drive to WIS 59 to keep wildlife off the roadway and direct their movement toward ecopassages. For the Sunset Drive-to-County X Alternative, WisDOT and Waukesha County will evaluate two ecopassages on Sunset Drive as well as wildlife barriers on both sides of Sunset Drive from County X to the Wisconsin & Southern Railroad. (emphasis added)

> **Recommendation:** We recommend that FHWA, WisDOT, and Waukesha County coordinate with WDNR to determine location, number, and characteristics of ecopassages and wildlife barriers. We recommend coordination with WDNR, since WDNR is the agency that authored the Strategy and is responsible for implementing conservation strategies for state-listed species. Potential locations of ecopassages and/or wildlife barriers should be included in the Final EIS per coordination with WDNR, rather than determined during the design phase, to inform decision makers and the public regarding potential mitigation measures and the extent of impact. We also request that correspondence with WDNR on this issue be added to the Final EIS as an appendix. Lastly, we urge FHWA, WisDOT, and Waukesha County commit to follow WDNR's recommendations regarding ecopassages and wildlife barriers.

Snake and turtle exclusion barriers are designed to minimize movement into work areas and allow removal of animals from works areas to reduce mortality during construction. The Draft EIS indicates that WDNR's Strategy provides detailed specifications for snake exclusion fencing.

> **Recommendation:** We request FHWA, WisDOT, and Waukesha County commit in the ROD to following the detailed specifications for exclusion fencing found in WDNR's Strategy.

The potential for adverse impacts to threatened mussel and fish species is expected to be minimal because of the location and type of construction involving waterways. WisDOT and Waukesha

County will avoid in-stream work between March 1 and June 15 of any construction year to protect fish spawning. The Draft EIS further states that WisDOT will coordinate with WDNR if it is unable to avoid in-stream work during that period.

> **Recommendation:** We request FHWA, WisDOT, and Waukesha County commit in the ROD to avoiding in-stream work between March 1 and June 15 to protect fish spawning.

WisDOT and Waukesha County will conduct field surveys for potential threatened and endangered plant species that could be affected. If a particular plant species is found within the project's area of potential effect, further measures to avoid or minimize impacts will be evaluated. Where avoidance is not possible, WisDOT and Waukesha County will coordinate with WDNR on possible mitigation measures such as transplanting affected plants outside the area of potential effect.

> **Recommendation:** We request FHWA, WisDOT, and Waukesha County commit in the ROD to following all such mitigation measures proposed by the WDNR, including transplanting when appropriate.

Non-Native Invasive Species

The Draft EIS indicates that, given the amount of new right-of-way to be acquired from the edges of wetlands north and south of Sunset Drive compared to the size of the wetlands, the project would have minimal impact on floral quality. However, just a "foothold" for some invasives is enough to compromise large portions of certain wetlands, especially if associated with construction site runoff, siltation, and sedimentation. Additionally, upland buffers adjacent to several wetlands (4, 7, and 8) will be disrupted by the Pebble Creek alternatives. A small upland (0.12 acre impact to upland U-18(NW)) that will be affected contains 80 percent dominant native species, indicating high quality habitat with low disturbance.

> **Recommendation:** Based on the above information, we strongly recommend FHWA, WisDOT, and Waukesha County draft and commit to implementing a NNIS monitoring/eradication plan, particularly for high quality parcels. We recommend FHWA, WisDOT, and Waukesha County coordinate the drafting of a monitoring/eradication schedule with WDNR and SEWRPC, to capitalize on the experience gained by these two entities. We also request that correspondence with WDNR and SEWRPC on this issue be added to the Final EIS as an appendix.

Voluntary Tree Mitigation

The Draft EIS indicates that the Pebble Creek West and Far West Alternatives would have notable visual changes. From Sunset Drive south to near Hawthorne Hollow, this alternative would be on new alignment through a densely-wooded area west of the Pebble Creek wetlands. The Draft EIS does not contain quantitative information concerning the amount of upland habitat that will be impacted by the proposed alternatives.

Recommendation: We recommend the Final EIS include quantitative information regarding the amount of upland habitat that could be affected by each alternative and an exhibit which illustrates location of impacted upland habitat. We also urge FHWA, WisDOT, and Waukesha County to voluntarily mitigate for tree loss using native species. A native species list can be coordinated with WDNR and SEWRPC and included as an appendix to the Final EIS. As previously stated, we recommend mitigation in areas that would enhance the riparian buffer of the Pebble Creek Watershed as a priority.

Air Quality

According to the Draft EIS, EPA is proposing to determine that the Milwaukee-Racine area, of which Waukesha County is a part, has attained the 2006 $PM_{2.5}$ air quality standard (April, 2012). The Milwaukee-Racine area has been recently re-designated by EPA to attainment status for 8-hour ozone (July, 2012). Nevertheless, the National Institute for Occupational Safety and Health (NIOSH) has determined that diesel exhaust is a potential occupational carcinogen, based on a combination of chemical, genotoxicity, and carcinogenicity data. Acute exposures to diesel exhaust have been linked to health problems such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Based on this information, EPA recommends the following measures be implemented by FHWA, WisDOT, Waukesha County, and its contractors to further reduce impacts to human health from diesel emissions during construction.

Recommendation: In the Final EIS, please indicate whether any of the following recommended mitigation measures have been included. We urge FHWA, WisDOT, and Waukesha County to commit to implementing as many of the following BMPs as possible.

- Use ultra low-sulfur diesel fuel.
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the exposure of personnel to concentrated fumes.
- Use catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Attach a hose to the tailpipe of diesel vehicles running indoors and exhaust the fumes outside, where they cannot reenter the workplace. Inspect hoses regularly for defects and damage.
- Use enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintain diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.

- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Purchase new vehicles that are equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids such as block heaters to warm the engine to reduce diesel emissions.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.